REMOTE MATERIALS SCIENCE INTERNET EXPERIMENTS:

SOLID STATE PHOTOVOLTAIC CELL CHARACTERIZATION

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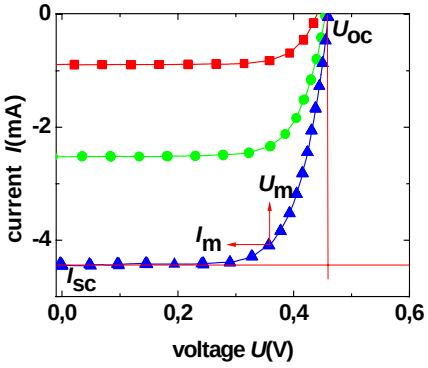
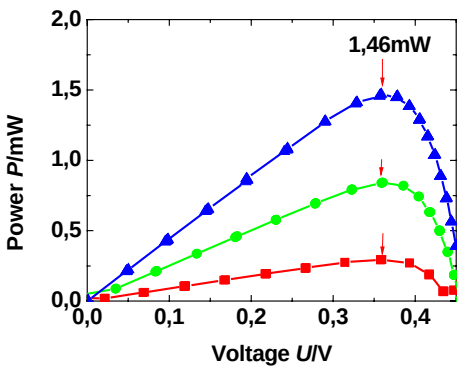
ABSTRACT

A solid-state photovoltaic cell characterization experiment across the Internet with all the features of the exact scientific experiment has been built (http://kdt-4.karlov.mff.cuni.cz/vacharakteristika_2_en.html) as a part of e- laboratory [1]. All communication is through the Internet, using web services. On the client side only standard browser and implicit Java support is used, without any additional modifications. The evaluation of the measured data (Fig.1 and Fig.2) using standard photovoltaic conversion theory

$$\eta = \frac{P_{el}}{P_{rad}} = \eta_r \eta_e \eta_p \eta_{el} = \eta_r \eta_e \eta_p FF \,,$$

is presented. The „life“ presentation of the experiment will be demonstrated on the Symposium.





[1] F. Schauer, F. Lustig and M. Ozvoldova: Remote Materials Science Internet Experiments : Solid State Photovoltaic Cell Characterisation , Journal of Materials Education (USA) **29**(2007)193.